U.S. Department of Transportation
Federal Aviation Administration

Advisory Circular

Subject: PASSENGER SAFETY INFORMATION BRIEFING AND BRIEFING CARDS

Date: 5/9/89 **Initiated by:** AFS-220

AC No: AC 121-24A **Change:**

1. PURPOSE. This advisory circular (AC) provides information regarding the item that are required to be, or should be, covered in oral passenger briefings and on passenger briefing cards. The advisory circular provides specific information about air carrier operations conducted under Federal Aviation Regulations (FAR) Part 121. It also provides suggestions about making this information interesting and meaningful.

2. CANCELLATION. AC 121-24, Passenger Safety Information Briefing and Briefing Cards, dated June 23, 1977, is canceled.

3. RELATED READING MATERIAL. FAR Sections 121.311, 121.317, 121.333, 121.571, 121.573, 121.577, 121.586, 121.589; Airworthiness Directive 74-08-09; and Title 14 Code of Federal Regulations, Section 252.4.

4. BACKGROUND. An alert, knowledgeable person has a much better chance of surviving any life- or injury-threatening situation which may occur during passenger-carrying operations in civil aviation. Therefore, the Federal Aviation Administration requires a passenger information system for U.S. air carriers which includes oral briefings and briefing cards. It would be desirable to have every airline passenger highly motivated; however, motivating people, even when their own personal safety is involved, is not easy. One way to increase passenger motivation is to make the safety information briefings as interesting and attractive as possible. This AC encourages individual operators to be innovative in their approach in imparting such information.

5. DISCUSSION.

a. Oral Briefings. The pretakeoff oral briefing should be given so passengers can clearly hear it and easily see the required demonstrations. Crewmembers giving these briefings should speak slowly and distinctly. When more than one crewmember is used to give the briefings and demonstrations, every effort should be made to ensure that those persons are evenly distributed throughout the passenger compartments and are located in the vicinity of floor level exits. Crewmembers giving the demonstrations should

coordinate them with the applicable information given in the oral briefing, be animated, and make eye contact with as many passengers as possible. The preferred method of pretakeoff oral briefing may be given by video means. This method of passenger briefing should be considered when the aircraft is equipped with the necessary video and sound equipment. The advantage of a video tape presentation is the assurance that a complete briefing is given, that the diction is good, and that an overall high quality of briefing is maintained. A video tape presentation also lends itself very well to a multilingual presentation when it is necessary and can include "signing" for the deaf. Airlines using video presentations should have a procedure to ensure that screens used during these presentations, which extend into the aisles, are properly stowed prior to taxi, takeoff, and landing.

(1) Pretakeoff. Before each takeoff, the operator should ensure that all passengers are orally briefed on each of the following:

(i) Compliance with Signs and Placards. The briefing should include a statement that Federal Aviation Regulations require passenger compliance with the lighted passenger information signs and posted placards.

(ii) Smoking. The briefing should also include when, where, and under what conditions smoking is prohibited. This should include a statement advising passengers that smoking is not permitted on the ground, anytime the smoking sign is illuminated or, if applicable, when a flight is scheduled to be 2 hours or less in duration. The briefing should also state that smoking is prohibited in the lavatories and other designated non-smoking areas and that tampering with, destroying, or disabling smoke detectors in the lavatories are prohibited by Federal Law. On flights where smoking is permitted, an announcement should be made stating that the smoking of cigars and pipes is not permitted.

(iii) Seatbelts. Crewmembers should brief passengers on the method of fastening, tightening, and unfastening seatbelts and that seatbelts should be worn low and tight. Passengers should also be informed that their seatbelts should be fastened anytime the seatbelt sign is illuminated.

(iv) Exits. Crewmembers should brief passengers on the location of emergency exits. Crewmembers should point to these exits.

(v) Flotation Equipment. Crewmembers should brief on the type, location, and use of flotation cushions. This briefing should include the type of equipment available and the method of use in the water, such as putting the arms through the straps and resting the torso on the cushion.

(vi) Passengers Needing Assistance. Crewmembers should individually brief a passenger who may need assistance in moving expeditiously to an exit. If the person is accompanied by an attendant, the attendant should also be briefed. The briefing should include information about the most appropriate route to an exit and the most appropriate time to start moving toward that exit. There should also be an inquiry about the most appropriate manner of assisting the person.

(vii) Floor Proximity Emergency Lighting. Crewmembers should inform passengers that emergency lights are located on or near the floor of the aircraft.

(viii) Oxygen Equipment. Before reaching 25,000 feet, crewmembers should demonstrate the use of oxygen equipment, including locating, donning, and adjusting the equipment; any actions which might be necessary to start the flow of oxygen; and the prohibition against smoking during oxygen use. Passengers should also be advised to don their am oxygen masks before assisting children with their masks. In addition, the announcement should include the information that oxygen mask reservoir bags will not inflate although sufficient oxygen is flowing into the bag.

(ix) Supplemental Information. Passengers should be briefed regarding passenger briefing cards and additional safety actions. Passengers should be told that the briefing cards contain additional safety information which they should read. They should also be instructed regarding the location of the cards. The briefing should also contain instructions regarding passenger compliance with the following pretakeoff requirements: proper stowage of each passenger's carry-on baggage: positioning of each passenger's seat. back to the upright position; securing each passenger's food and beverage tray in its stowed position; and collection of any food, beverage or tableware.

(x) Extended Overwater Operations. If the flight involves extended overwater operations, crewmembers should brief passengers before the overwater portion of the flight begins. This briefing should be given before takeoff if the flight proceeds directly over water. It should include:

(A) Exits. Crewmembers should instruct passengers on the most appropriate exits for their use. In determining the most appropriate exits, consideration should be given to the passenger load, the capacity of each slide/raft or liferaft, and those exits which have been designated for use in water landings and raft launchings.

(B) Life Preservers. Crewmembers should point out their stowage locations and demonstrate their removal from stowage, extraction from pouches, donning, and their use, including manual and oral inflation methods, instructions on when the equipment should be inflated, and manual operation of survivor locator lights and accessories.

(C) Liferafts and Slide/Rafts. Crewmembers should instruct passengers on liferaft and slide/raft retrieval from stowage, preparation for use, inflation methods, launching locations, and mans of securing to the aircraft.

(2) Postflight.

(i) Seatbelts. Immediately before or after the "seatbelt" sign is turned off, an announcement should be made that passengers should keep their seatbelts fastened while seated even if the "seatbelt" sign is turned off.

(ii) Information Signs. A crewmember should remind passengers to be seated anytime the "seatbelt" sign is illuminated: this is especially true when passengers are not seated with their seatbelts fastened.

(3) Preflight. The minimum preflight briefing information should include the following: seatbelts must be securely fastened, smoking materials must be extinguished, tray tables and seat backs must be secured in their stowed position, carrier-furnished food, beverages, or tableware must be picked up, and carry-on baggage must be properly stowed for landing.

(4) Postlanding. The minimum postlanding briefing should advise passengers to remain seated with seatbelts fastened until the "seatbelt" sign has been turned off. This announcement should be accompanied by an explanation that this is for their own safety and the safety of those seated around them.

(5) Crewmember Procedures. Each oral briefing provided by a carrier for its passengers must be explained and described in the appropriate part of its operations manual. The manual should also contain a description of crewmember tasks and coordination procedures to ensure passenger compliance with information signs and crewmember safety instructions. This description should include the stipulation that flight attendants should notify the pilot in command anytime a passenger is not complying with safety instructions. Flight attendants should neither be assigned nor perform nonsafety-related duties during the safety briefings if those duties could obstruct the view of the passengers or distract them from listening.

b. Passenger Safety Briefing Cards. Oral briefings should be supplemented with briefing cards which should be pertinent to only that type and model of aircraft and are consistent with the airline's procedures. In addition, when airplane equipment is substantially different, even within the same model of airplane, depictions on these cards would be more easily understood if airplane equipment differences were presented on a separate card. Merely labeling exits or other equipment with the pertinent aircraft type, model, or configuration does not provide enough information to the average passenger and may be confusing. Cards should also show methods of operating the emergency exits and other instructions necessary for the use of emergency equipment.

(1) Design and Location. The passenger safety briefing card should be designed and located so that the seated passenger will be able to see and have access to the card when it is placed in its normal location aboard the aircraft. The method used to depict equipment and actions can be pictures of people, diagram, drawings, words, or combinations of these. The use of international symbols is encouraged. All depictions should be easy to understand and not be complex. Cards should also be interesting and attractive so passengers will want to read them. For example, a multicolored card which has pictures and drawings will be picked up and read more often than a black and white printed card.

(2) Extraneous Information. Passenger safety briefing cards should only contain information that is essential for safety. For example, advertising, schedules, or promotional information is not safety related and should not be on the cards.

(3) Content. Safety briefing cards that provide information to passengers should include:

(i) Passenger Compliance with Safety Information. The instructions on the cards should advise passengers that they should comply with safety instructions including signs, placards, and instructions of crewmembers. The importance of complying with the seatbelt sign should be emphasized.

(ii) Smoking. The cards should inform passengers that smoking is prohibited in the lavatories or other designated nonsmoking areas, during takeoff and landing, anytime the "no smoking" sign is illuminated, or when in the immediate vicinity of passenger oxygen use.

(iii) Seatbelts. The cards should have instructions for fastening, tightening, and unfastening seatbelts.

(iv) Floor Proximity Emergency Lighting. The cards should inform passengers that emergency lights are located on or in the vicinity of the floor of the airplane.

(v) Exit Location. The cards should give the locations of every available exit in the cabin. The cards should encourage passengers to familiarize themselves with the locations of exits other than the one they entered.

(vi) Exit Operations. The cards should contain diagrams depicting the opening of each exit type, and any manual operations necessary to successfully complete an evacuation such as manual inflation of the evacuation slide or the recommended placement of the hatch on the seat or outside the airplane. Past experience has indicated that confusion is sometimes created by a diagram or picture that demonstrates operation of an exit peculiar to only one side of the airplane. If, for instance, all emergency door handles rotate toward the rear of the aircraft, this should be explained on the cards. The cards should inform passengers not to bring carry-on baggage to the exit.

(vii) Evacuation Slide Use. The cards should contain instructions for passengers to jump outward in the seated position with legs extended, and not to sit (e.g., at the door sill) when entering the evacuation slide.

(viii) Overwing Exit Use. The cards should contain instructions illustrating the proper method of egressing through an overwing exit. The cards should also contain instructions for passengers to walk or run on any ramp that leads from an exit, and the direction and route of escape after leaving all overwing exits should be included.

(ix) Brace Position. The cards should contain information about protective brace positions to be assumed by passengers, including children, in all seat orientations (i.e., forward-, aft-, and side-facing) and all seat spacings for that airplane. Information about these brace positions is contained in Appendix 1.

(x) Individual Flotation Devices. The cards should depict their stowage location and contain instructions concerning removal of the devices from their stowage locations, extraction from stowage pouches or packages, manual and oral inflation backup systems, its use in the water, and the manual operation of survivor locator lights and accessories, as appropriate.

(xi) Oxygen Mask. The cards should contain instructions on the location, donning, and means for adjusting Oxygen masks; any further actions needed to start the flow of oxygen; and instructions to passengers to don their own Oxygen mask before assisting children with their masks.

(xii) Supplemental Information. The cards may contain supplemental instructions. For example, for takeoff and landing, carry-on baggage and tray tables must be properly stowed, galley service items must be collected from passengers and stowed, and seat backs must be placed in their fully upright position.

(xiii) Extended Overwater Operations. When liferafts are required to be carried in extended Overwater operations, the cards should depict liferaft and slide/raft stowage, launching, and securing locations. The cards also should contain instructions for passengers concerning preparation for use, inflation methods, and the means for securing rafts to the aircraft.

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APPENDIX 1. BRACE FOR IMPACT POSITION

a. The Aeromedical Research Branch of the Civil Aeromedical Institute (CAMI), Protection and Survival Laboratory, conducted research and tests with respect to establishing brace for impact positions for passengers and flight attendants.

b. In order to establish a best brace position for each person, it would be necessary to know the size and physical limitations of the individual, the seating configuration, the type of emergency, and many other factors.

c. There are two primary reasons for bracing for impact. One is to reduce flailing and the other is to reduce secondary impact. Secondary impact can be reduced by prepositioning the body (particularly the head) against the surface it would strike during impact. Flailing can be reduced by having the occupant flex, bend, or lean forward over their legs in same manner.

d. Aircraft being utilized today my have seating arrangements which result in very small seat pitches (the space between the seats) or may have a combination of small and large seat pitch spacing (i.e., an aircraft with a first-class/coach seating arrangement). Also, recent amendments to FAR part 121 have upgraded the airworthiness standards for flight attendant seats, including the requirement for shoulder harnesses.

e. Passengers should take a brace position in one of several ways and, in all cases, the seatbelt should be worn as tight as possible and as low on the torso as possible.

(1) In aircraft with low-density seating or seats spaced relatively far apart, passengers should, as depicted in Figures 2 or 3, rest their heads and chests against their legs. Flailing can be reduced by having the passengers grasp their ankles or legs as depicted in Figure 2 or, if they are unable to do that, they should wrap their arms under their legs as depicted in Figure 3. Their heads should be face down in their laps and not turned to one side.

(2) In aircraft with high-density seating or in cases where passengers are physically limited and are unable to place their heads in their laps, they should position their heads and arms against the seat (or bulkhead) in front of them as depicted in Figure 1.

(3) Passengers in aft-facing seats should rest their heads on the seat back (or bulkhead) behind them as depicted in Figure 5. The passengers should not place their hands in back of their heads, as has been recommended in the past, but, rather, should either place their hands in their laps or grasp the side of their seats.

(4) The passengers' feet should be placed flat on the floor and slightly in front of the edge of the seat.

(5) Passengers should not use pillows or blankets between their bodies and the object they are bracing against (either a seat back or their own body). Pillows and blankets provide little, if any, energy absorption and increase the possibility of secondary impact injury. Also, pillows and blankets could create additional clutter in the aisles, which could be a detriment in an emergency evacuation.

(6) Children who are occupying approved child restraint devices should be braced in accordance with the manufacturer's instructions. children in passenger seats should utilize the same brace position as adults. Adults holding infants should provide as uniform support as possible to the infant's head, neck, and body, and lean over the infant to minimize tie possibility of injury due to flailing.

(7) Pregnant or handicapped passengers may or may not need the assistance of another person in taking a brace position but should, in general, attempt to take the same brace position as the other passengers. If aft-facing passenger seats are available, these passengers may benefit from being relocated to those seats.

f. The brace positions for flight attendants will depend on the direction their seats face and type of restraint system those seats are equipped with.

(1) In forward-facing seats quipped with an inertial reel shoulder harness, the flight attendants should sit back in the seat as depicted in Figure 5 and rest their chin on their sternum as depicted in Figure 4. If the seats are equipped with noninertial reel-type shoulder harnesses, the flight attendants should fasten their shoulder harnesses as tight as possible, lean against them, and rest their chins on their sternums as depicted in Figure 4. The flight attendants' arms and hands should be positioned in their laps or holding onto the side of their seats, but should not be holding onto their restraint systems.

(2) In rear-facing flight attendant seats, the flight attendants should sit back in their seats, rest their heads against their seat backs or headrests, and have the restraint systems, either inertial or noninertial type, as tight as possible as depicted in Figure 5. Their hands should not be clasped behind their heads, but may be positioned as in a forward-facing seat.

g. Helicopter "brace for impact" positions are the same as those for airplanes. Flight attendants, if present, should utilize either the brace position for passengers or for flight attendants, depending on their seats and restraint systems.

h. In the case of a planned emergency landing, the passengers should be briefed on the above information. In the case of an unplanned emergency, the flight attendants may only have enough time to give a short command such as "lean over" or "grab your ankles." Experience has shown that in an attempt to take a brace position of some sort, the passenger will end up in a position which could result in less injury than if no attempt had been made at all.

BRACING POSITIONS

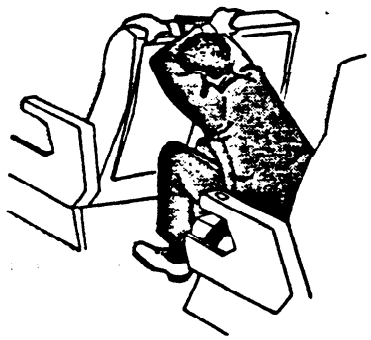

Figure 1.

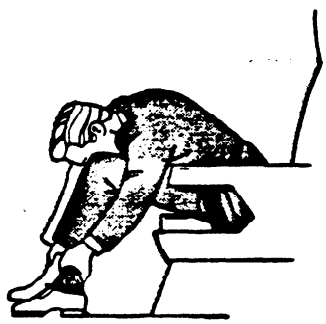

Figure 2.

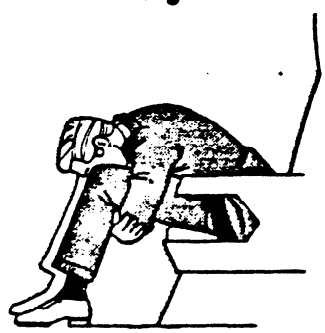

Figure 3.

Figure 4.

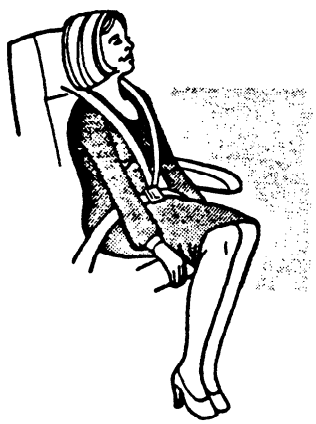

Figure 5.